[002] This application claims priority from German Application serial No. 103 14 064.6 filed March 28, 2003.

[003] FIELD OF THE INVENTION

[004] The invention concerns a method for determining the rotation speed and rotation direction of a component~~, in the manner defined in greater detail in the preamble of Claim 1~~.

[005] BACKGROUND OF THE INVENTION

[013] ~~According to the invention this objective is achieved by a method having the characteristics of Claim 1.~~

[014] SUMMARY OF THE INVENTION

[018] BRIEF DESCRIPTION OF THE DRAWINGS

[019] ~~Other advantages and advantageous further developments of the invention emerge from the claims and from the example embodiments described in principle below~~ The invention will now be described, by way of example, with reference to the ~~drawing,~~ accompanying drawings in which ~~shows~~:

[021] Fig. 2 ~~are~~ is a graphic illustration of two at least approximately sinusoidal sensor signals of the sensor device according to Fig. 1, with a corresponding rectangular variation of a sensor output signal produced by pulse signals generated by the sensor device and used to calculate and determine the rotation direction of a rotation speed of the signal wheel;

[029] DETAILED DESCRIPTION OF THE INVENTION

[030] Referring to Fig. 1, a sensor device 1 for determining the rotation speed and direction of a rotary component (e.g., signal wheel) 2 is shown, which is arranged a certain distance LS from the component 2. The distance between the component 2 and the sensor device 1 is denoted here as the air gap LS, and during operation this varies dynamically due to manufacturing inaccuracies, for example, out-of-roundness of the component 2.

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1	Sensor device
2	Component (e.g., signal wheel)
3	Toothed profile
DB	Flux density change
LS	Air gap
low	Pulse height
high	Pulse height
high_v	Rotation-direction-dependent pulse height
high_r	Rotation-direction-dependent pulse height
s_o	Upper switching limit
s_u	Lower switching limit
t	Time
t_pb	Pulse width
t_pd	Period duration
t_pb_v	Rotation speed- or direction-dependent pulse width
t_pb_r	Rotation speed- or direction-dependent pulse width
t_pb_limit	Limit value of the pulse width
T_w	Time point
T_s	Time point
I, II	Sensor signal